

Panamic Sites and Archaeological Mollusks of Lower California

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(2 Tables)

INTRODUCTION

THIS PAPER IS AN ATTEMPT to systematically list all Lower California archaeological molluscan species from assemblages that are primarily Panamic in origin. Therefore the series of middens on the Pacific coast of the peninsula, north of Punta San Antonio, containing Californian faunal province shells (c. f. MORIARTY, 1968a), are not mentioned in this paper. Table 1 indicates what species are found at each site and Table 2 tries to show what the species tell us about the site occupations.

On the basis of Table 2 we might divide the Panamic sites into two groups. A northern group is represented by the sites of Playa de Moreno, San Felipe and Bahía de los Angeles. These were inhabited only in the wet winter months; as for example at San Felipe, where the Kiliwa in historic times went to fish. "By summer, it was said, the fresh water at San Felipe was so dried up that no one lived there permanently. The indians gathered clams and mussels and caught fish and dried them in the sun to take back to their permanent rancherias," (MEIGS, 1939: p. 27). It was only at sites of this part of Lower Califor-

Table 1

Archaeological Mollusca

	PM ¹	SF ²	SLG ³	GC ⁴	BA ⁵	SJI ⁶	SL ⁷
PELECYPODA							
<i>Pecten vogdesi</i> ARNOLD, 1906			P	×	1, 2, 3	A	
<i>Dosinia ponderosa</i> (GRAY, 1838)		1	A	×	1, 2		
<i>Chione undatella</i> (SOWERBY, 1835)		3	P		1, 2, 3	C	
<i>Pinna rugosa</i> SOWERBY, 1835					1		
<i>Cardita affinis</i> SOWERBY, 1833	×	1, 2			1, 2	R	
<i>Ostrea palmula</i> CARPENTER, 1856	×	1			1, 2		
<i>Anomia peruviana</i> D'ORBIGNY, 1846					1	R	
<i>Anadara multicostata</i> (SOWERBY, 1833)			A		1		
<i>Ostrea fisheri</i> DALL, 1914					1	A	
<i>Pteria sterna</i> (GOULD, 1851)		1			1		
<i>Trachycardium panamense</i> DALL, 1916		1, 2			1		
<i>Laevicardium elatum</i> (SOWERBY, 1833)		1	A	×	3		
<i>Chione gnidia</i> (BRODERIP & SOWERBY, 1829)	×	1			2		
<i>Chione fluctifraga</i> (SOWERBY, 1853)	×	1			2		
<i>Spondylus princeps</i> BRODERIP, 1833					2	A	
<i>Protothaca grata</i> (SAY, 1831)		1, 2	P		2		
<i>Tagelus californianus</i> (CONRAD, 1837)		1			2		
<i>Ostrea angelica</i> ROCHEBRUNE, 1895		1			?2	A	
<i>Glycymeris gigantea</i> (REEVE, 1843)			A		3, 2	R	
<i>Megapitaria squalida</i> (SOWERBY, 1835)			P		2	C	

Table 1 [continued]

	PM ¹	SF ²	SLG ³	GC ⁴	BA ⁵	SJI ⁶	SL ⁷
<i>Chama buddiana</i> C. B. ADAMS, 1852							2, 3
<i>Chione cortezi</i> (CARPENTER, 1864)	×						
<i>Mulinia pallida</i> (BRODERIP & SOWERBY, 1829)	×						
<i>Aequipecten tumbezensis</i> (D'ORBIGNY, 1846)	×						
<i>Mulinia coloradoensis</i> DALL, 1894		4					
<i>Ostrea iridescens</i> HANLEY, 1854		?2					
<i>Trachycardium senticosum</i> (SOWERBY, 1833)		2					
<i>Semele flavescens</i> (GOULD, 1851)		2					
<i>Pinctada mazatlanica</i> (HANLEY, 1856)							5
<i>Arca pacifica</i> (SOWERBY, 1833)		1	C				
<i>Barbatia reeveana</i> (D'ORBIGNY, 1846)						C	
<i>Anadara formosa</i> (SOWERBY, 1833)						R	
<i>Glycymeris maculata</i> (BRODERIP, 1832)		1				R	
<i>Glycymeris multicostata</i> (SOWERBY, 1833)						C	
<i>Modiolus capax</i> (CONRAD, 1837)		1	P			R	
<i>Aequipecten circularis</i> (SOWERBY, 1835)						A	
<i>Lyropecten subnodosus</i> (SOWERBY, 1835)			P			A	
<i>Trigoniocardia biangulata</i> (BRODERIP & SOWERBY, 1829)						R	
<i>Periglypta multicosta</i> (SOWERBY, 1835)						R	
GASTROPODA							
<i>Haliotis</i> sp.						3	
<i>Bulla gouldiana</i> PILSBRY, 1895						1	
<i>Fusinus dupetitthouarsi</i> (KIENER, 1846)						1	
<i>Hexaplex erythrostomus</i> (SWAINSON, 1831)						1, 2	
<i>Crucibulum spinosum</i> (SOWERBY, 1824)	×	?2				1	R
<i>Conus regularis</i> SOWERBY, 1833						1	
<i>Strombus gracilior</i> SOWERBY, 1825			A			1, 2	
<i>Turbo fluctuosus</i> WOOD, 1828						1	
<i>Tegula rugosa</i> (A. ADAMS, 1855)		1				1	
<i>Olivella biplicata</i> (SOWERBY, 1825)						3	
<i>Polinices reclusianus</i> (DESHAYES, 1839)	?	1	P			2	
<i>Muricanthus nigrinus</i> (PHILIPPI, 1845)		1	A				2
<i>Strombus galeatus</i> SWAINSON, 1823			P				2
<i>Conus fergusonii</i> SOWERBY, 1873							1
<i>Oliva incrassata</i> (LIGHTFOOT, 1786)		1					4
<i>Cerithium stercusmuscarum</i> VALENCIENNES, 1833		2				R	
<i>Crepidula incurva</i> (BRODERIP, 1834)	×						
<i>Calyptrea mamillaris</i> BRODERIP, 1834	×						
<i>Crucibulum umbrella</i> (DESHAYES, 1830)	×						
<i>Calyptrea subreflexa</i> (CARPENTER, 1856)		2					
<i>Nerita funiculata</i> MENKE, 1851		2					
<i>Acmaea mitella</i> MENKE, 1847		?2					

¹ Playa de Moreno Beach, north of San Felipe. Collected by James R. Moriarty on October 31, 1958. Probably mixed with modern shell.

² San Felipe. (1): SCHENCK & GIFFORD, 1952. (2): Collected by James R. Moriarty from beach on October 31, 1958. Sample probably mixed with modern shell. (3): Clam shell from extensive superficial midden on beach ridge, at edge of coastal

terrace, just above and W of air strip occupying a stranded lagoon, close to the San Felipe village well (31°01'N; 114°51'W), MORIARTY, 1968a.

³ San Luis Gonzaga Bay, COAN, 1965. (P) = present; (C) = common; (A) = abundant.

⁴ Gardner Cave, MEIGHAN, 1965.

⁵ Bahía de los Angeles. (1): E. L. Davis correspondence (July

1965). (2): midden material collected by James R. Moriarty.
(3): cave and midden material, MASSEY & OSBORNE, 1961.
⁶ San José Island, EMERSON, 1960. (R) = rare; (C) = common; (A) = abundant.
⁷ San Lucas. (1): a 30 mm diameter ring with a 10 mm hole that was ground down and polished; collected by H. N. Lowe at Cape San Lucas and at present located in the San Diego Natural History Museum collections. (2): shells from terrace along

Golfo de California at Punta Pescadero (23°47'06"N; 109°42'00"W), MORIARTY, 1968. (3): Shell from shore of Ensenada de los Aripes, at Radio Station of La Paz, W of town proper, in indurated sand below high-tide level, and below level of adjacent midden (ca. 24°09'N; ca. 110°19'30"W), MORIARTY, 1968. (4): Punta Conejo, a shell mound about 40 miles N of La Paz and ½ to ¼ mile inland from Punta Conejo on road to La Paz; collected by C. W. Meighan. (5): Cape San Lucas area shells, MASSEY & OSBORNE, 1961.

nia that trade shells from other faunal provinces appear (i. e. *Haliotis* sp., *Olivella biplicata*).
The San José Island site represents a possible southern group of summer occupation sites. Like the San Blas Nayarit shell middens, free swimming pectens are very abundant and suggest the presence of a deep water fishing industry (FELDMAN, n.d.). Perhaps a summer time sea salt production was also a factor in the occupation of the San José Island and San Blas sites at this season (c. f. MORIARTY, 1968b).

Table 2

Archaeological Mollusca Sites			
Site ⁸	Radiocarbon Date ⁹	Species Niche ¹⁰	Seasonality ¹¹
Playa de Moreno	—	R:3; S:3; B:1; ?:4; FS:1	?winter only
San Felipe (1)	—	R:7; S:10; B:1; ?:1; R, S:4	winter only
San Felipe (2)	—	R:5; S:3; ?:3; R, S:1	—
San Felipe (3)	598 A. D.	R:1	—
San Luis Gonzaga	—	R:1; S:15; R, S:2	winter & summer
Gardner Cave	1352 A. D.	S:3; ?:1	—
Bahía de los Angeles (1)	—	R:5; S:6; B:1; ?:3; R, S:1; FS:1; S, B:2	winter only
Bahía de los Angeles (2)	4138 B. C. 532 B. C.	R:3; S:8; B:1 ?:1; FS:1; S, B:2	winter only
Bahía de los Angeles (3)	—	S:4; FS:1; ?:1	
San José Island	—	R:12; S:9; B:1; ?:6; R, S:4; FS:2	summer only
San Lucas (1)	—	R:1	—
San Lucas (2)	263 A. D.	R:1 S:2	—
San Lucas (3)	1152 B. C.	S:1	—
San Lucas (4)	—	S:1	—
San Lucas (5)	—	?:1	—

⁸ See footnotes of Table 1 for an explanation of site numbers.

⁹ Except for the Gardner Cave date, all Radiocarbon dates are from MORIARTY, 1968.

¹⁰ Based upon data in PARKER, 1964, and KEEN, 1958:
B = low-salinity lagoon and mangrove environment (brackish);
S = intertidal sand beaches and sand flats to 26 meters;
R = intertidal and shallow rocky shore assemblage;

FS = free swimming animal;
? = niche not known;
the numbers denote how many species are of each niche per site assemblage.

¹¹ Seasonality data, from MALKIN, 1962, are based upon recent collecting habits of the Seri Indians of Sonora for Gulf of California species.

Panamic Lower California shows continuous exploitation of its molluscan resources from 6000 years ago up to the arrival of the European explorers. However, still little is known about the archaeological mollusks of most of the peninsula. Regions like the coast of the Bahía de Sebastian Vizcaino, where the Panamic fauna presumably grades into the Californian fauna and the peninsula from La Paz to Cabo San Lucas are almost totally unknown. Species lists from the middens of these and other Lower Californian areas might be of considerable interest for the light they could shed on the way of life of the aboriginal inhabitants of the peninsula.

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